MIDDLEFIELD-ELLIS-WHISMAN

MOUNTAIN VIEW, CA | MEW STUDY AREA | JULY 1989

EPA ANNOUNCES CLEAN-UP PLAN FOR MEW STUDY AREA

EPA SIGNS RECORD OF DECISION

The U. S. Environmental Protection Agency (EPA) has approved plans to clean up contaminated soil and groundwater at the Middlefield-Ellis-Whisman (MEW) Study Area in Mountain View, California. The MEW Study Area is comprised of facilities owned or operated by about 20 companies, including three Superfund sites: Fairchild Semiconductor Corporation, Intel Corporation, and Raytheon Company. Soil and groundwater were contaminated by activities requiring storage handling and use of hazardous chemicals, including metals and volatile organic compounds (VOCs).

On June 9, 1989, EPA's Regional Administrator signed a Record of Decision (ROD) that outlines EPA's plans for cleaning up soil and groundwater contamination at the Study Area.

The plan for soil cleanup is to extract contaminant vapors from the ground and to treat them with granular activated carbon (i.e. soil vapor extraction). The plan for groundwater cleanup is to pump and treat the groundwater using an air stripping tower.

The three sites in the MEW Study Area are on EPA's National Priorities List (NPL) -- a nationwide list of seriously contaminated areas identified for clean-up under EPA's Superfund program.

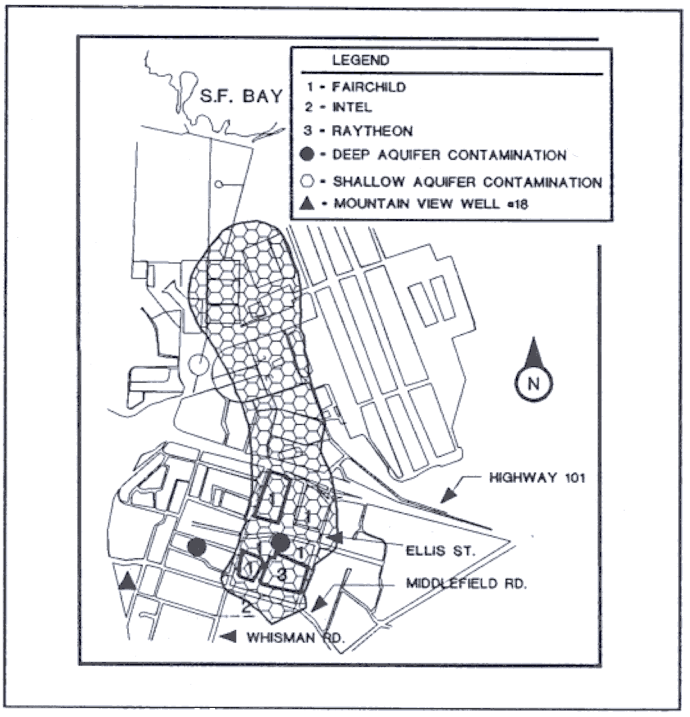

Figure 1, Site Map

EPA's CLEAN-UP CHOICE

Soils

Soil vapor extraction involves removing the volatile soil contaminants without excavating the soil itself. This is accomplished by installing "vapor extraction wells" through which air containing VOCs is pumped from the soil. Contaminants in the extracted air are then removed using carbon treatment, if necessary, and the treated air is released. This treatment process is designed to meet all applicable air emission standards.

Most of the vapor extraction will take place within the existing Fairchild and Raytheon slurry walls which contain the bulk of the site soil contamination. (In 1986 and 1987, Fairchild and Raytheon, respectively, constructed underground barriers called slurry walls to contain contaminants within their properties.) Several small areas outside the slurry walls will be cleaned up by extracting soil vapors.

Also included as part of the soil clean-up plan is excavation of contaminated soil and treatment by aeration. This will involve digging up the soil, exposing it to the air and backfilling soil into the

excavated area. This method has already been used at Intel and may also be used to a limited degree at other facilities in MEW. Remedies will meet emission standards of the Bay Area Air Quality Management District.

The cleanup goals for soil are one part per million (ppm) trichloroethylene (TCE) inside the slurry walls and 0.5 ppm outside the slurry walls. These soil cleanup goals are based on the amount of contamination that can remain in the soil and still maintain groundwater cleanup goals.

Groundwater

The selected cleanup plan for contaminated groundwater is to extract the groundwater by pumping and to treat it by running it through air stripping towers which causes the contaminants to evaporate from the groundwater.

These clean-up remedies are chosen because they have worked at other sites and were cost-effective.

Airborne emissions will meet all Bay Area Air Quality Management District standards. It is anticipated that emission controls consisting of granular activated carbon will be required when the complete clean-up plan is implemented. The extracted groundwater will be used to the maximum extent feasible, with a goal of 100% reuse. Extracted water which cannot be reused will be discharged under National Pollutant Discharge Elimination System (NPDES) permit to local streams.

A clean-up goal of five (5) parts per billion TCE has been established for the shallow aquifers, which are the uppermost water-bearing zones. The shallow aquifers are not currently used for drinking water. The shallow and deep aquifers are separated by a thick natural clay barrier called an aquitard. The clean-up goal for deep aquifers which are used for drinking water is 0.8 parts per billion TCE. Attainment of these levels will also assure clean-up of other VOCs such as Trichloroethane (TCA) and Freon 113 to at least the enforceable federal drinking water standards called Maximum Contaminant Levels.

The soil cleanup is expected to be in operation one to six years. The groundwater cleanup for shallow aquifers may take at least 46 years or into the indefinite future. The cleanup of deep aquifers is estimated to take at least two years and possibly as long as 45 years. There will be regular monitoring of groundwater during the cleanup. The entire remedy is estimated to cost between $49-$56 million.

SITE BACKGROUND

Soil and groundwater contamination within the MEW Study Area was first identified in 1981. Investigations have revealed other areas of contamination in and near the city of Mountain View and on Moffett Field Naval Air Station. Only those cleanup activities relating to the MEW Study Area are described in this fact sheet.

Various facilities located in the vicinity of the MEW Study Area are currently or were previously involved in activities requiring the storage, handling and use of hazardous chemicals, including metals and VOCs. Investigations at several of these facilities have revealed that chemicals are present in the soil and groundwater. Contamination at the MEW Study Area consists primarily of TCE, a VOC commonly used as a degreaser. Concentrations of TCE and other VOCs in the groundwater exceed applicable water quality standards.

Recent studies have shown that the contaminated groundwater at MEW -- commonly known as a "plume" -- has migrated onto Moffett Field, and appears to have mixed, in part, with contamination from Moffett Field. The MEW plume is illustrated in Figure 1.

The cleanup actions taken to date at the MEW Study Area by Fairchild, Intel, and Raytheon include:

- Contaminated Soil Removal and Treatment;
- Tank Removal and Replacement;
- Installation of Slurry Wells;
- Groundwater Extraction and Treatment; and
- Well Sealing by EPA and Fairchild.

NEXT STEPS

EPA's next steps will be to enter into negotiations with the Potentially Responsible Parties (PRPs)--parties who may be legally responsible for costs of clean-up--to reach an agreement regarding who will conduct site clean-up work and associated activities. EPA will retain the responsibility to oversee work at the site.

Clean-up activities at the site will begin following design of detailed plans for clean-up. During this stage, EPA or the PRPs will describe specific methods and procedures for soil vapor extraction, excavation, groundwater pumping, and treating and groundwater monitoring. EPA will be coordinating with the City of Mountain View to minimize any adverse impacts to the City. At the completion of the design, field work to clean up the entire site will begin.

TECHNICAL ASSISTANCE GRANTS (TAGS): A NEW COMMUNITY RELATIONS OPPORTUNITY

EPA has just started a new community relations activity--the Technical Assistance Grants (TAG) program. Under this program one eligibile community group at each Superfund site can get one grant of up to $50,000 in federal funds for technical assistance in understanding site documents. The purpose of the TAG program is to assist community groups in interpreting technical infomation. To be eligible a group must be:

- Incorporated,
- Able to meet a 35% matching funds requirement (in-kind contributions--i.e., donated goods and services--as well as waiver are permissible),
- Able to meet financial and administrative requirements, and
- Capable of preparing a plan to use the technical assistance based on EPA's technical work schedule.

Processing the grant application and obtaining the technical assistance are estimated to take from six to nine months for completion.

For more information please call:

Community Relations Coordinator
Helen King Burke
on the Toll-Free Information Line at:
800-231-3075

IS MY DRINKING WATER SAFE?

Yes. The City of Mountain View operates and ensures that drinking water supplied to consumers meets all state and federal drinking water standards. The public water supply well closest to MEW is Mountain View Well #18 (see Figure 3). The Water from Mountain View Well #18 is blended with surface water from the Hetch Hetchy system.

Due to the drought, this well was recently put back into use after being closed for routine maintenance. EPA has determined that at the historic and current pumping rate, contamination from the MEW Study Area will not reach Mountain View Well #18. The City of Mountain View regularly tests each of its wells, including Well #18.

FOR MORE INFORMATION

If you have questions or would like more information on the MEW Study Area, please contact:

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EPA SUPERFUND TOLL-FREE INFORMATION LINE: (800) 231-3075

If you call the toll-free number, please leave a message on the answering machine, and your call will be returned as soon as possible. Copies of the ROD and the Administrative Record, which is a file containing site-related documents, that support EPA's choice of cleanup method, are available for review at:

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585 Franklin Street
Mountain View, CA. 94041
(415) 966-6335

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Inside: EPA Announces Clean-up Plan for MEW Study Area